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(71) Applicant: FREEMARKETS, INC. [US/US]; One Oliver Plaza, 210 Sixth Avenue, Pittsburgh, PA 15222 (US).

(72) Inventors: KINNEY, Sam, E., Jr.; 314 Maple Lane, Sewickley, PA 15143 (US). RAGO, Vincent, F.; 15 Roxbury Road, Pittsburgh, PA 15221 (US). STEVENS, Robert, G.; 5518 Ellsworth Avenue, Apartment 1, Pittsburgh, PA 15232 (US). BECKER, David, J.; 22 Sewickley Hills Drive, Sewickley, PA 15143 (US). BERNARD, Anthony, F.; 2518 Lindenwood Drive, Wexford, PA 15090 (US). RUPP, William, D.; 2151 Cayuga Drive, Pittsburgh, PA 15239 (US). HECKMANN, Daniel, C.; 4889 East Willock Road, Pittsburgh, PA 15227 (US). MEAKEM, Glen, T.; 703 Cochran Street, Sewickley, PA 15143 (US).

(74) Agent: MORGAN, LEWIS & BOCKUS LLP; Boswell, Mary Jane, 1800 M Street, N.W., Washington, DC 20036-5869 (US).

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(54) Title: METHOD AND SYSTEM FOR CONDUCTING ELECTRONIC AUCTIONS WITH MULTI–CURRENCY BIDDING

(57) Abstract

A method and system for conducting electronic online auctions using multi–currency bidding is disclosed. Each of the bidders can specify bids in their own distinct local currency. The originator of the auction compares the submitted bids in a base currency after the local currency bids are transformed from the local currency into the base currency. Each of the bidders views a relative comparison of bids in the context of their own local currency.

SUPPLIER B VIEW (GERMANY)

BIDDER	BID TIME	BID
SUP A	02:03:38	DM 2,846,614
SUP B	02:06:47	DM 2,733,653
SUP C	02:10:09	DM 2,727,426
SUP A	02:18:29	DM 2,709,130

METHOD AND SYSTEM FOR CONDUCTING ELECTRONIC AUCTIONS
WITH MULTI-CURRENCY BIDDING

Background of the Invention

The disclosed invention relates generally to conducting online electronic

5   auctions, and in particular to online electronic auctions featuring multi-currency

bidding.

Traditional Procurement Models

Procurement of supplies has traditionally involved high transaction costs,

especially information search costs. The introduction of electronic commerce has

10   introduced new methods of procurement that lower some of the transaction costs

associated with procurement. Online procurement, or business-to-business

electronic commerce, matches buyers and suppliers so that transactions can take

place electronically. There are three models for online procurement: catalog,

buyer-bidding auction, and supplier-bidding auction.

15   The "catalog" model of online procurement was the first to be developed.

The first electronic catalogs were developed by suppliers to help customers obtain

information about products and order supplies electronically. These first electronic

catalogs were single-source; i.e. they only allowed customers to obtain information

and products from that supplier.

20   However, customers are not typically satisfied with being "locked in" to one

supplier - they wanted to be able to compare a number of competing products to

be sure of getting the product features they wanted, at the best price. So suppliers

with single-source electronic catalogs started to include competitors' products on

their systems. An example of this is American's SABRE system, which includes

25   offerings from competing suppliers (airlines), thereby further reducing information

search costs. By offering competing products, the electronic catalog that offers

competitor's products becomes an "electronic market".

Many of these systems are biased towards the supplier offering the

electronic market. Procurement costs can be further lowered with an unbiased

5   electronic market that promotes competition.

For standard products and services, the need to have an unbiased market

has been met for many industries by third party "market makers." For example,

Inventory Locator Services has compiled a database that lists all airplane parts

suppliers that have a certain item in stock. Buyers dial into the database to get

10   information on the parts they need. Here, it is a third party, Inventory Locator

Service, not a supplier, creating the unbiased electronic market.

The electronic catalog model of electronic commerce involves one buyer

and one supplier at a time. When many buyers compete for the right to buy from

one supplier, a buyer-bidding auction model is created. A noteworthy example of

15   the buyer-bidding auction model is that operated by PriceLine.com and described

in U.S. Pat. No. 5,794,207 issued to Walker et al. In this system, potential buyers

compete for airline tickets by submitting a bid for an airline ticket on the PriceLine

website, and airlines can choose to accept a bid, thereby committing the buyer to

buy the ticket.

20   The catalog and buyer-bidding auction types of electronic markets do not

work in some situations however. If the required product is custom made for the

buyer, it is not possible for suppliers to publish a set price in advance for a catalog

market. Likewise, it is not possible for buyers to specify all of the details of the

product they want to purchase in a buyer-bidding auction. Traditionally, when a company requires a custom industrial product, procurement is made by a buyer for the company who searches for a potential supplier and acquires custom-tailored price quotes from a supplier for the needed custom product. The search is slow

5   and somewhat random because it usually relies heavily on personal relationships. The costs associated with locating vendors, comparing their products, negotiating, and paperwork become big factors in a purchase decision. The cost of switching suppliers is very large, which means that the quoted price is probably not the lowest fair price and that it is hard for a new supplier to enter the market.

10   As an alternative, buyers use auctions to save money. The assignee of the present application developed a system wherein suppliers downwardly bid against one another to achieve the lowest market price in a supplier-bidding auction.

In a supplier-bidding auction, bid prices typically start high and move downward in reverse-auction format as suppliers interact to establish a closing

15   price. The auction marketplace is one-sided, i.e. one buyer and many potential suppliers. Typically, the products being purchased are components or materials. "Components" typically mean fabricated tangible pieces or parts that become part of assemblies of durable products. Example components include gears, bearings, appliance shelves, or door handles. "Materials" typically mean bulk quantities of

20   raw materials that are further transformed into product. Example materials include corn syrup or sheet steel.

Industrial buyers do not typically purchase one component at a time. Rather, they purchase whole families of similar components. At times, components

are strongly related to one another. As an example, a buyer might purchase a

given plastic knob in two different colors, or might purchase a nameplate in four

different languages. These parts are so similar that by definition they must be

purchased from the same supplier - all of the knobs are made using the same

5   mold. These items are therefore grouped into a single lot. Suppliers in industrial

auctions must provide unit price quotes for all line items in a lot.

Auction Process

The process for a supplier-bidding auction is described below with reference

10   to Figs. 1 and 2. Fig. 1 illustrates the functional elements and entities in a supplier-

bidding auction, while Fig. 2 is a process diagram that identifies the tasks

performed by each of the involved entities.

The supplier-bidding auction model requires that the bidding product or

service be defined by the buyer 10. An auction coordinator 20 works with buyers

15   10 to prepare for and conduct an auction and to define the potentially new supply

relationships resulting from the auction.

As shown in Fig. 2, in the Initial Contact phase 102 of the auction process,

the coordinator 20 contacts the buyer 10, and the buyer 10 provides data to the

coordinator 20. The coordinator 20 prepares a specification 50 for each desired

20   product or part 52. Once the product 52 is defined, potential suppliers 30 for the

product are identified. The coordinator 20 and buyer 10 work together to compile

this list of potential suppliers from suppliers already known to the buyer 10 as well

as suppliers recommended by the coordinator 20.

The buyer 10 makes a decision regarding which potential suppliers 30 will receive invitations to the upcoming Auction. Suppliers 30 that accept Auction invitations are then sent notices regarding the upcoming Auction, as well as client software to install in preparation of participating in the Auction.

5   In the RFQ phase 104, the coordinator 20 works with the buyer 10 to prepare a Request for Quotation ("RFQ") 54. The coordinator 20 collects and maintains the RFQ data provided by buyer 10, and then publishes the RFQ 54, and manages the published RFQ 54. The RFQ 54 includes specifications 50 for all of the parts 52 covered by the RFQ 54. In the RFQ 54, buyer 10 aggregates similar

10   part or commodity line items into job "lots." These lots allow suppliers 30 to bid on that portion of the business for which they are best suited.

During the auction 56, bids 58 will be taken against individual lots (and their constituent parts 52) within RFQ 54. While suppliers 30 must submit actual unit prices for all line items, the competition in an Auction is based on the aggregate

15   value bid for lots. The aggregate value bid for a lot depends upon the level and mix of line item bids and the quantity for each line item. Therefore, suppliers 30 submit bids at the line item level, but compete on the lot level.

In the Auction Administration phase 106, coordinator 20 coordinates the Auction and administers the Auction setup and preparation. The coordinator 20

20   sends a RFQ 54 to each participating supplier 30, and assists participating suppliers 30 with preparation for the Auction.

In the Auction phase 108, suppliers 30 submit bids 58 on the lots and monitor the progress of the bidding by the participating suppliers 30. The coordinator 20 assists, observes, and administers the Auction.

When the bidding period is over, the auction enters the Auction Results

5   Administration phase 110. In this phase, coordinator 20 analyzes and administers the Auction results, which are viewed by buyer 10. The buyer 10 begins to conduct final qualification of the low bidding supplier(s). The buyer 10 retains the right not to award business to a low bidding supplier 30 based on final qualification results or other business concerns.

10   In the ensuing Contract Administration phase 112, the coordinator 20 facilitates settlements 60 awarded by the buyer 10 to suppliers 30. Contracts 52 are then drawn up between buyer 10 and suppliers 30.

Communications and Software

15   The Auction is conducted electronically between potential suppliers 30 at their respective remote sites and the coordinator 20 at its site. As shown in Figs. 3 and 4, information is conveyed between the coordinator 20 and the suppliers 30 via a communications medium such as a network service provider 40 accessed by the participants through, for example, dial-up telephone connections using modems, or

20   direct network connections. A computer software application is used to manage the Auction. The software application has two components: a client component 31 and a server component 23. The client component 31 operates on a computer at the site of each of the potential suppliers 30. The client component is used by

suppliers 30 to make bids during the Auction. The bids are sent via the network

service provider 40 to the site of the coordinator, where it is received by the server

component 23 of the software application. The client component 31 includes

software used to make a connection through telephone lines or the Internet to the

5   server component 23. Bids 58 are submitted over this connection and updates are

sent to connected suppliers.

Bids 58 can only be submitted using the client component 31 of the

application -- this ensures that buyers do not circumvent the bidding process, and

that only invited suppliers participate in the bidding. Typically, bidders can see

10   their bids and bids placed by other suppliers for each lot on the client component

31. When a bidder submits a bid, that bid is sent to the server component 23 and

evaluated to determine whether the bid is from an authorized bidder, and whether

the bid has exceeded a pre-determined maximum acceptable price. Bids placed

by a supplier are broadcast to all connected bidders thereby enabling every

15   participating bidder to see quickly the change in market conditions and begin

planning their competitive responses.

Summary of the Invention

Traditional online auctions focus on price as the sole variable upon which

20   the online competition is based. Price is the sole bidding parameter that is

provided by the bidders and hence is the sole parameter upon which a selection

process is made. Relative valuations between different bid prices can be based on

a simple comparison of the relative magnitude of the submitted bids.

The present invention creates a market of competition in transactions that are global in nature. Bidders in foreign countries often desire to participate in industrial auctions that originate in the United States. More generally, bidders in foreign countries often desire to participate in auctions that originate outside of

5   their own country. The foreign bidders are placed at a significant disadvantage because of their relative unfamiliarity of valuations in other currencies. The present invention enables bidders to specify bids in any foreign currency. These foreign currency bids are compared by an originator of the auction using a transformation process that converts foreign currency bids into a base currency (e.g., U.S.

10   dollars). The transformation process enables an apples-to-apples comparison of bids that otherwise could not be compared.

The present invention also enables bidders to view an ongoing auction in their own currency context based upon their selected local currency. This supplier-context viewing feature is enabled through the detransformation of all submitted

15   bids into individual supplier contexts. Through the detransformation process, each bidder can simultaneously view a relative comparison of bids in their own context.

Brief Description of the Drawings

The accompanying drawings, which are included to provide a further

20   understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention that together with the description serve to explain the principles of the invention.

In the drawings:

Fig. 1 illustrates the elements and entities involved in an auction process;

Fig. 2 illustrates the tasks performed by the entities involved in an auction process;

Fig. 3 illustrates the communications links between the coordinator and the

5   potential suppliers in an auction;

Fig. 4 illustrates the client and server components of the computer software application that conducts the auction and the hardware at the sites of the coordinator and the potential suppliers on which the client and server components operate;

10   Fig. 5 illustrates a bid transformation function; and

Figs. 6A-6C illustrate bid history charts based upon buyer and supplier viewpoints.

Detailed Description

15   Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings. The present invention described below extends the operation of the inventive auction system and method described in greater detail in co-pending Application No. _____, entitled "Method and System for Conducting Electronic Auctions," filed

20   February 19, 1999, the disclosure of which is hereby expressly incorporated in the present application.

Online electronic auctions provide a powerful interactive medium for creating and capitalizing upon traditional auction dynamics. The extensive reach of online

electronic auctions combined with inherent forms of anonymity make it an attractive choice for virtually any auction sale.

Online electronic auctions enable potential bidders to view a rapidly changing auction landscape as hundreds of bids can easily be processed within a

5   few hours. Traditional auction dynamics often dictate that bidding accelerates as the closing of the auction approaches.

Participation within an auction is necessarily strategic in nature. A successful bidder typically has a game plan that is based upon a personal valuation of the auction item (e.g., collectible item, supply contract, etc.). A proper

10   execution of that bidding strategy will determine whether the bidder has bought or sold the auction item at an acceptable price level.

A key element to the attractiveness of online electronic auctions is the bidder's ability to monitor the auction. As conventional auctions are based upon a single price parameter, comparison of the submitted bids is based simply on the

15   relative magnitude of the submitted bids. Various bid history graphs can be used to illustrate the historical progress of bidding within the auction. The historical progress will illustrate in some form the downward or upward movement in the auction market as new market leading bids are submitted.

Keeping abreast of the auction market requires an accurate perception of

20   the market. Online electronic auctions are advantageous because of their ability to broadcast bid price information to potential bidders. Through this broadcast mechanism, each of the bidders is able to re-create the same view of the dynamic auction market. This feature of online electronic auctions is critical because it

10

ensures that no bidder is placed at a disadvantage for having an inaccurate

assessment of the current market condition.

The creation of a level playing field is a general goal of online electronic

auction systems. Improvements of online electronic auctions are typically focused

5   on ensuring consistency and commonality between the various potential bidders.

After all, a perceived disadvantage by one or more bidders will quickly eliminate the

attractiveness of the electronic online auction. This results because online

auctions are designed to provide equal amounts of information to bidders who

cannot rely on their physical presence at the auction.

10   The present invention recognizes that the creation of a common view into

the auction market may not be advantageous or efficient. In some instances, the

creation of a different view into the auction market is desired by one or more

bidders.

For example, consider downward-price online industrial auctions. Like most

15   online electronic auctions, the downward-price online industrial auction is typically

based upon the submission of bid prices by the various suppliers. The relative

attractiveness of the submitted bid prices is predominantly based upon the

difference in price. Significantly, bid prices are conventionally submitted in a

common currency (e.g., U.S. dollars). Each of the bidders submits a U.S. dollar bid

20   price to the auction server and receives, from the auction server, U.S. dollar bid

prices that have been submitted by their competitors. This commonality enables

the buyer as well as the potential suppliers to have a common view of the ranking

of bids.

This common view of the ranking of submitted bids has traditionally been viewed as a necessary consequence of implementing an interactive online auction process wherein bid values are to be compared in real-time to each other. The submission of common currency bids enables the auction system to present an

5   apples-to-apples comparison of the submitted bids.

In industrial electronic online auction markets, bidders often reside in countries other than the United States. This fact alone is evidence of the extensive reach of the electronic online auction. Participants in foreign countries who choose to participate in an electronic online auction are often at a disadvantage. Although

10   they may be submitting bids in U.S. dollars, they are not accustomed to relative valuations in U.S. dollars. Rather, valuations only have meaning when converted into their own local currency (e.g., Japanese Yen, Swiss Francs, Deutsche Marks, etc.).

During the auction process, bidders in foreign countries must conceptualize

15   the market leading bids in their own local currency. The prospect of visualizing relative valuations of a foreign currency is taxing enough without considering the pressures inherently introduced through traditional auction dynamics. In particular, during the "heat" of an auction, a bidder in a foreign country may miscalculate the value of the market leading bid as compared to a floor (or ceiling) that he estimated

20   in his local currency. This miscalculation would cause him to submit a new market leading bid that was below (or above) his walk-away price. In a sense, that miscalculation is the price he paid for his willingness to compete on an even playing field based upon U.S. dollars. Ideally, each of the potential suppliers in a

foreign country would be able to participate in an auction that is conducted in their own local currency.

It is a feature of the present invention that bids submitted in various local currencies can be effectively compared by an auction system. It is a further feature

5   of the present invention that each participant in the auction can maintain a separate view of the auction status based upon their own particular context. This bidder-specific context viewing feature allows each bidder to participate in an auction that appears to be conducted in his own local currency.

These and other features of the present invention are enabled through a

10   transformation process that is implemented by the auction server component and/or the client component. General transformation bidding is described in greater detail in co-pending Application No. _____, entitled "Method and System for Conducting Electronic Auctions with Multi-Parameter Price Equalization Bidding," filed concurrently herewith, the disclosure of which is hereby expressly

15   incorporated in the present application.

The transformation process can be illustrated by the generic transformation mechanism illustrated in Fig. 5. As illustrated, bid transformation 500 represents a function (f) that is operative on input variables (x) and $(a_1..a_n)$. In the context of downward-based industrial auctions, input variables $(a_1..a_n)$ represent non-

20   comparative bid parameters, while input variable (x) represents a supplier comparative bid parameter. The output of bid transformation 500 is the buyer comparative bid parameter (y).

In the generic description of the transformation process in Fig. 5, two types

of comparative bid parameters exist. A buyer comparative bid parameter (y) refers

to a parameter (e.g., base currency price), resulting from the transformation

process, upon which the buyer will compare competing bids. A supplier

5   comparative bid parameter (x), on the other hand, is an input to the transformation

function. The supplier comparative bid parameter (x) can be used by a supplier to

compare competing bids in the supplier's context.

As noted, non-comparative bid parameters are also used as inputs to the

transformation process. Unlike supplier comparative bid parameters, non-

10   comparative bid parameters (e.g., non-price parameters) are not directly used to

compare competing bids.

In this transformation framework, a supplier comparative bid parameter

value can be modified by the transformation process based upon non-comparative

bid parameter values to yield a buyer comparative bid parameter value.

15   Applied to the scenario where bids in multiple currencies are desired to be

submitted, the local currency of a supplier (e.g., Yen) represents a supplier

comparative bid parameter. The exchange rate between the local currency and the

base currency (e.g., U.S. dollars) represents a non-comparative bid parameter.

The non-comparative bid parameter is provided by the buyer or retrieved from a

20   known source of exchange rates prior to the start of the auction.

In this framework, the supplier's bid is a single supplier comparative bid

parameter (i.e., local currency price) to be transformed into a buyer comparative

bid parameter (i.e., base currency price) using a non-comparative bid parameter (i.e., exchange rate).

In multi-currency bidding, the exchange rates are not confidential. Accordingly, the transformation process can be performed at the client component

5   and/or the auction server component. For example, assume that Supplier A is bidding in Japanese Yen, Supplier B is bidding in Swiss Francs, and the buyer is viewing the auction in U.S. dollars.

Ultimately, the buyer desires to view the submitted bids in U.S. dollars. To facilitate the buyer view, the foreign currency bids are transformed prior to

10   presentation to the buyer. Various implementations are possible. In one implementation, the client component of the foreign supplier is designed to submit bids in the local currency of the foreign supplier. In this case, it would be the responsibility of the auction server component to transform the local currency bid into the base currency. Alternatively, the client component of the foreign supplier

15   can be designed to submit bids in the base currency of the buyer. In this case, it would be the responsibility of the client component to transform the local currency bid input by the foreign supplier into the base currency prior to transmission to the auction server. To support this transformation function, the client component of the foreign supplier knows the target base currency and also has access to the

20   appropriate exchange rate.

After each of the submitted bids have been transformed into the supplier comparative bid parameter (U.S. dollars), an "apples-to-apples" comparison can be performed. The "apples-to-apples" comparison can be effected in any of a variety

of ways including the bid history chart of Fig. 6A. The bid history chart of Fig. 6A

illustrates a relative ranking of transformed received bids in U.S. dollars.

Having received a bid from a potential supplier, the auction server must then

broadcast the received bid to the other participating suppliers. This broadcast

5   function creates a real-time online competition between suppliers who are able to

view the activities of their competitors and plan their corresponding response

strategy.

As noted, the local currency bid is referred to as the supplier comparative

bid parameter. As illustrated in Fig. 5, the supplier comparative bid parameter is

10   one of the inputs (x) into the bid transformation function (f). The supplier

comparative bid parameter is significant because it enables the supplier to view the

auction competition in his own context. In other words, a supplier can view all

competing bids as if the other suppliers were all bidding in their own local currency.

In this manner, a supplier can view the competitive auction landscape in his own

15   context.

In one embodiment, the transformation process can be implemented as a

linear function having a single multiplicative factor. This transformation can be

represented by the relation $y = mx$, where m is the exchange rate, x is the local

currency chosen by the foreign supplier, and y is the base currency chosen by the

20   buyer. In an alternative embodiment, the linear transformation function can be

implemented as a linear function having a multiplicative factor and an additive

factor. In this embodiment, the additive factor is used to handicap or discount the

transaction cost between currencies.

Bids viewed in the buyer's context have been converted into the buyer

comparative bid parameter (i.e., U.S. dollars). On the supplier side, each of the

bids submitted from other participating suppliers are detransformed from the buyer

comparative bid parameter into the supplier comparative bid parameter. This

5   detransformation is based upon the formula $x = y/m$. In this detransformation

process, U.S. dollar bid values that are to be broadcast to Supplier A are converted

to Supplier A's local currency using the appropriate exchange rate.

After Supplier A receives the detransformed bid values, Supplier A is then

able to display a relative comparison of the bids in his own local currency This

10   relative comparison corresponds to the relative comparison of the bids in the buyer

context. Fig. 6B illustrates a bid history chart in the context of Supplier A. In this

example, it is assumed that Supplier A's local currency is French Francs, and the

conversion rate is $1 = FF5.60. This conversion rate results in a multiplicative

factor $m = 1/5.60 = 0.1786$.

15   From Supplier A's perspective, all other suppliers appear to be bidding in

French Francs. With this view into the auction landscape, Supplier A can

comfortably estimate the market leading bids relative to his own walk-away price.

No mental translation of U.S. dollars to French Francs is required by Supplier A. If

Supplier A decides to beat the market leading bid, Supplier A would simply reduce

20   his French Francs bid and submit the new bid (e.g., bid of FF 8,924,194 bid at

02:18:29) to the auction server. The new French Francs bid would then be

transformed into U.S. dollars, i.e., $y = mx = FF 8,924,194 * 0.1786 = \$1,593,606$,

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using the multiplicative factor defined by the French Franc to U.S. dollar exchange rate

In a similar manner, Supplier B can also view the competitive climate of the auction in his own local currency. Supplier B's view is illustrated in Fig. 6C. In this

5   example, it is assumed that Supplier B is bidding in Deutsche Marks with an exchange rate of $1 = DM1.70. This conversion rate results in a multiplicative factor m = 1/5.60 = 0.5882. In Supplier B's view, Supplier A's new transformed bid of $1,593,606 at 02:18:29 is fed back to Supplier B as a DM 2,709,130 bid, i.e., x = y/m = 1,593,606/0.5882 = 2,709,130, using the multiplicative factor defined for the

10   Deutsche Mark to U.S. dollar exchange rate.

In combination, Figs. 6A-6C illustrate a feature of the present invention that enables each supplier to view the auction in his own context. These buyer-specific and supplier-specific contexts enable the system to create a multi-currency bidding market.

15   Ultimately, the foreign supplier desires to view the submitted bids in his own local currency. To facilitate the supplier's view, the U.S. dollar bids must be transformed prior to presentation to the foreign supplier. Various implementations are possible. In one implementation, the auction server component can be designed to transmit bids in the local currency of the foreign supplier. In this case,

20   it would be the responsibility of the auction server component to transform the base currency bid into a local currency bid. It should be noted that a bid submitted in a first local currency could also be converted directly into a second local currency by the auction server component.

Alternatively, the client component of the foreign supplier can be designed to receive bids in the base currency of the buyer. In this case, it would be the responsibility of the client component to transform the received base currency bid into the local currency of the foreign supplier. To support this transformation

5   function, the client component of the foreign supplier must have access to the appropriate exchange rate. It should be noted again that a bid received by the foreign supplier in another local currency could also be converted directly into the supplier's own local currency by the client component.

While the invention has been described in detail and with reference to

10   specific embodiments thereof, it will be apparent to one skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope thereof. In particular, it should be noted that while the auction functions described above have been described in the context of downward pricing auctions the auction functions can be equally applied to upward pricing auctions.

15   Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

WHAT IS CLAIMED IS:

1.   A method of conducting an electronic online auction between a plurality of potential bidders, the plurality of potential bidders competing for a lot having at least one product, at least one of the plurality of potential bidders specifying bids in a currency different from a currency of an originator of the
5   auction, comprising the steps of:

     (a)   receiving a first bid in a first local currency from a first bidder;

     (b)   transforming said first bid in said first local currency into a base currency using a pre-defined exchange rate, said base currency being used by the originator of the auction to effect a relative
10   comparison of submitted bids based on said base currency; and

     (c)   transmitting bid information reflective of said first bid to a second bidder to enable said second bidder to view a relative comparison of submitted bids in a second local currency.

2.   The method of claim 1; wherein step (c) comprises the step of transmitting said transformed first bid in said base currency to said second bidder.

3.   The method of claim 1, further comprising the step of (d) generating a second bid in said second local currency using a second pre-defined exchange rate, said second bid in said second local currency having an equivalent value to

said first bid in said first local currency, and wherein step (c) comprises the step of

5   transmitting said second bid to said second bidder.

   4.   The method of claim 3, wherein step (d) comprises the step of

converting said transformed first bid in said base currency to a second bid in said

second local currency of said second bidder.

   5.   The method of claim 3, wherein step (d) comprises the step of

10   converting said first bid in said first local currency to a second bid in said second

local currency of said second bidder.

   6.   A method of conducting an electronic online auction between a

plurality of potential bidders, the plurality of potential bidders competing for a lot

having at least one product, at least one of the plurality of potential bidders

specifying bids in a currency different from a currency of an originator of the

5   auction, comprising the steps of:

   (a)   receiving a first bid from a first bidder, said first bid being used by an

           originator of the auction in the generation of a relative comparison of

           submitted bids based on a base currency;

   (b)   generating a second bid in a first local currency using a pre-defined

10   exchange rate, said second bid in said first local currency having an

           equivalent value to said first bid; and

(c)   transmitting said second bid in said first local currency to a second

        bidder, thereby enabling said second bidder to view a relative

        comparison of submitted bids in said first local currency of said

15   second bidder.

7.   The method of claim 6, wherein step (a) comprises the step of

receiving a first bid in a base currency from a first bidder.

8.   The method of claim 6, wherein step (a) comprises the step of

receiving a first bid in a second local currency, and further comprising the step of

(d) converting said first bid in said second local currency into a base currency.

9.   A method of participating an electronic online auction between a

plurality of potential bidders, the plurality of potential bidders competing for a lot

having at least one product, at least one of the plurality of potential bidders

specifying bids in a currency different from a currency of an originator of the

5   auction, comprising the steps of:

        (a)   specifying, by a first bidder, a first bid in a first local currency;

        (b)   transforming said first bid in said first local currency into a base

                currency using a pre-defined exchange rate, said base currency

                being used by the originator of the auction to effect a relative

10   comparison of submitted bids based on said base currency;

        (c)   transmitting said transformed first bid to an auction server;

(d)   receiving bid information reflective of a second bid submitted by a

         second bidder to said auction server; and

(e)   generating a relative comparison of bids submitted to said auction

15   server using said received bid information, said relative comparison of

         submitted bids being based on said first local currency.

10.   The method of claim 9, wherein step (d) comprises the step of

receiving a bid in said base currency, and further comprising the step of (f)

converting said received bid in said base currency into said first local currency

using a second pre-defined exchange rate.

11.   The method of claim 9, wherein step (d) comprises the step of

receiving a bid in a second local currency, and further comprising the step of (f)

converting said received bid in said second local currency into said first local

currency using a second pre-defined exchange rate.

12.   A method of participating in an electronic online auction between a

plurality of potential bidders, the plurality of potential bidders competing for a lot

having at least one product, at least one of the plurality of potential bidders

specifying bids in a currency different from a currency of an originator of the

5   auction, comprising the steps of:

(a)   specifying, by a first bidder, a first bid in a first local currency;

(b)   transmitting first bid information reflective of said first bid to an auction server, said first bid information being used by an originator of the auction in the generation of a relative comparison of submitted bids based on a base currency;

10

(c)   receiving second bid information reflective of a second bid submitted by a second bidder to said auction server;

(d)   generating a third bid in said first local currency using said received second bid information, said third bid in said first local currency having an equivalent value to said second bid; and

15

(e)   generating a relative comparison of bids submitted to said auction server, said relative comparison of submitted bids being based on said first local currency.

13.   The method of claim 12, further comprising the step of (f) transforming said first bid in said first local currency into a base currency using a pre-defined exchange rate, and wherein step (b) comprises the step of transmitting said transformed first bid in said first local currency to said auction server.

14.   The method of claim 12, wherein step (c) comprises the step of receiving a bid in a base currency, and wherein step (d) comprises the step of converting said received bid in said base currency into a third bid in said first local currency using a pre-defined exchange rate.

15.   The method of claim 12, wherein step (c) comprises the step of receiving a bid in a second local currency, and wherein step (d) comprises the step of converting said received bid in said second local currency into a third bid in said · first local currency using a pre-defined exchange rate.

16.   A system for conducting an electronic online auction between a plurality of potential bidders, the plurality of potential bidders competing for a lot having at least one product, at least one of the plurality of potential bidders specifying bids in a currency different from a currency of an originator of the

5   auction, comprising:

means for receiving a first bid in a first local currency from a first bidder;

means for transforming said first bid in said first local currency into a base currency using a pre-defined exchange rate, said base currency being used by the originator of the auction to effect a relative comparison of submitted bids based on

10   said base currency; and

means for transmitting bid information reflective of said first bid to a second bidder to enable said second bidder to view a relative comparison of submitted bids in a second local currency.

17.   The system of claim 16, wherein said transmitted bid information is said transformed first bid in said base currency.

18.   The system of claim 16, further comprising means for generating a
second bid in said second local currency using a second pre-defined exchange
rate, said second bid in said second local currency having an equivalent value to
said first bid in said first local currency, and wherein said transmitted bid

5   information is said second bid.

19.   The system of claim 18, wherein said means for generating converts
said transformed first bid in said base currency to a second bid in said second local
currency of said second bidder.

20.   The system of claim 18, wherein said means for generating converts

10   said first bid in said first local currency to a second bid in said second local
currency of said second bidder.

21.   A system for conducting an electronic online auction between a
plurality of potential bidders, the plurality of potential bidders competing for a lot
having at least one product, at least one of the plurality of potential bidders
specifying bids in a currency different from a currency of an originator of the

5   auction, comprising the steps of:
        means for receiving a first bid from a first bidder, said first bid being used by
an originator of the auction in the generation of a relative comparison of submitted
bids based on a base currency;

means for generating a second bid in a first local currency using a pre-

10   defined exchange rate, said second bid in said first local currency having an

equivalent value to said first bid; and

means for transmitting said second bid in said first local currency to a

second bidder, thereby enabling said second bidder to view a relative comparison

of submitted bids in said first local currency of said second bidder.

15   22.   The system of claim 21, wherein said first bid is in a base currency.

23.   The system of claim 21, wherein said first bid is in a second local

currency, and further comprising means for converting said first bid in said second

local currency into a base currency.

24.   A computer program product for enabling a processor in a computer

system to process bidding information in an auction between a plurality of bidders,

said computer program product comprising:

a computer usable medium having computer readable program code means

5   embodied in said medium for causing an application program to execute on the

computer system, said computer readable program code means comprising

a first computer readable program code means for enabling the

computer system to specify a first bid in a first local currency;

a second computer readable program code means for enabling the

10   computer system to transform said first bid in said first local currency into a

base currency using a pre-defined exchange rate, said base currency being

used by the originator of the auction to effect a relative comparison of

submitted bids based on said base currency;

a third computer readable program code means for enabling the

15   computer system to transmit said transformed first bid to an auction server;

a fourth computer readable program code means for enabling the

computer system to receive bid information reflective of a second bid

submitted by a second bidder to said auction server; and

a fifth computer readable program code means for enabling the

20   computer system to generate a relative comparison of bids submitted to said

auction server using said received bid information, said relative comparison

of submitted bids being based on said first local currency.

25.   The computer program product of claim 24, wherein said received bid

information is a bid in said base currency, and further comprising computer

readable program code means for enabling the computer system to generate

convert said received bid in said base currency into said first local currency using a

5   second pre-defined exchange rate.

26.   The computer program product of claim 24, wherein said received bid

information is a bid in a second local currency, and further comprising computer

readable program code means for enabling the computer system to convert said

received bid in said second local currency into said first local currency using a

5   second pre-defined exchange rate.

27.   A computer program product for enabling a processor in a computer

system to process bidding information in an auction between a plurality of bidders,

said computer program product comprising:

a computer usable medium having computer readable program code means

5   embodied in said medium for causing an application program to execute on the

computer system, said computer readable program code means comprising

a first computer readable program code means for enabling the

computer system to specify a first bid in a first local currency;

a second computer readable program code means for enabling the

10   computer system to transmit first bid information reflective of said first bid to

an auction server, said first bid information being used by an originator of

the auction in the generation of a relative comparison of submitted bids

based on a base currency;

a third computer readable program code means for enabling the

15   computer system to receive second bid information reflective of a second

bid submitted by a second bidder to said auction server;

a fourth computer readable program code means for enabling the

computer system to generate a third bid in said first local currency using

said received second bid information, said third bid in said first local

20   currency having an equivalent value to said second bid; and

a fifth computer readable program code means for enabling the computer system to generate a relative comparison of bids submitted to said auction server, said relative comparison of submitted bids being based on said first local currency.

28.   The computer program product of claim 27, further comprising computer readable program code means for enabling the computer system to transform said first bid in said first local currency into a base currency using a pre-defined exchange rate, and wherein said transmitted first bid information is said transformed first bid in said first local currency.

29.   The computer program product of claim 27, wherein said received second bid information is a bid in a base currency.

30.   The computer program product of claim 27, wherein said received second bid information is a bid in a second local currency.

31.   A computer program product for enabling a processor in a computer system to process bidding information in an auction between a plurality of bidders, said computer program product comprising:

a computer usable medium having computer readable program code means embodied in said medium for causing an application program to execute on the computer system, said computer readable program code means comprising

a first computer readable program code means for enabling the

computer system to receive a first bid in a first local currency from a first

bidder;

10   a second computer readable program code means for enabling the

computer system to transform said first bid in said first local currency into a

base currency using a pre-defined exchange rate, said base currency being

used by the originator of the auction to effect a relative comparison of

submitted bids based on said base currency; and

15   a third computer readable program code means for enabling the

computer system to transmit bid information reflective of said first bid to a

second bidder to enable said second bidder to view a relative comparison of

submitted bids in a second local currency.

32.   A computer program product for enabling a processor in a computer

20   system to process bidding information in an auction between a plurality of bidders,

said computer program product comprising:

a computer usable medium having computer readable program code means

embodied in said medium for causing an application program to execute on the

computer system, said computer readable program code means comprising

25   a first computer readable program code means for enabling the

computer system to receive a first bid from a first bidder, said first bid being

used by an originator of the auction in the generation of a relative

comparison of submitted bids based on a base currency;

a first computer readable program code means for enabling the

30   computer system to generate a second bid in a first local currency using a

pre-defined exchange rate, said second bid in said first local currency

having an equivalent value to said first bid; and

a first computer readable program code means for enabling the

computer system to transmit said second bid in said first local currency to a

35   second bidder, thereby enabling said second bidder to view a relative

comparison of submitted bids in said first local currency of said second
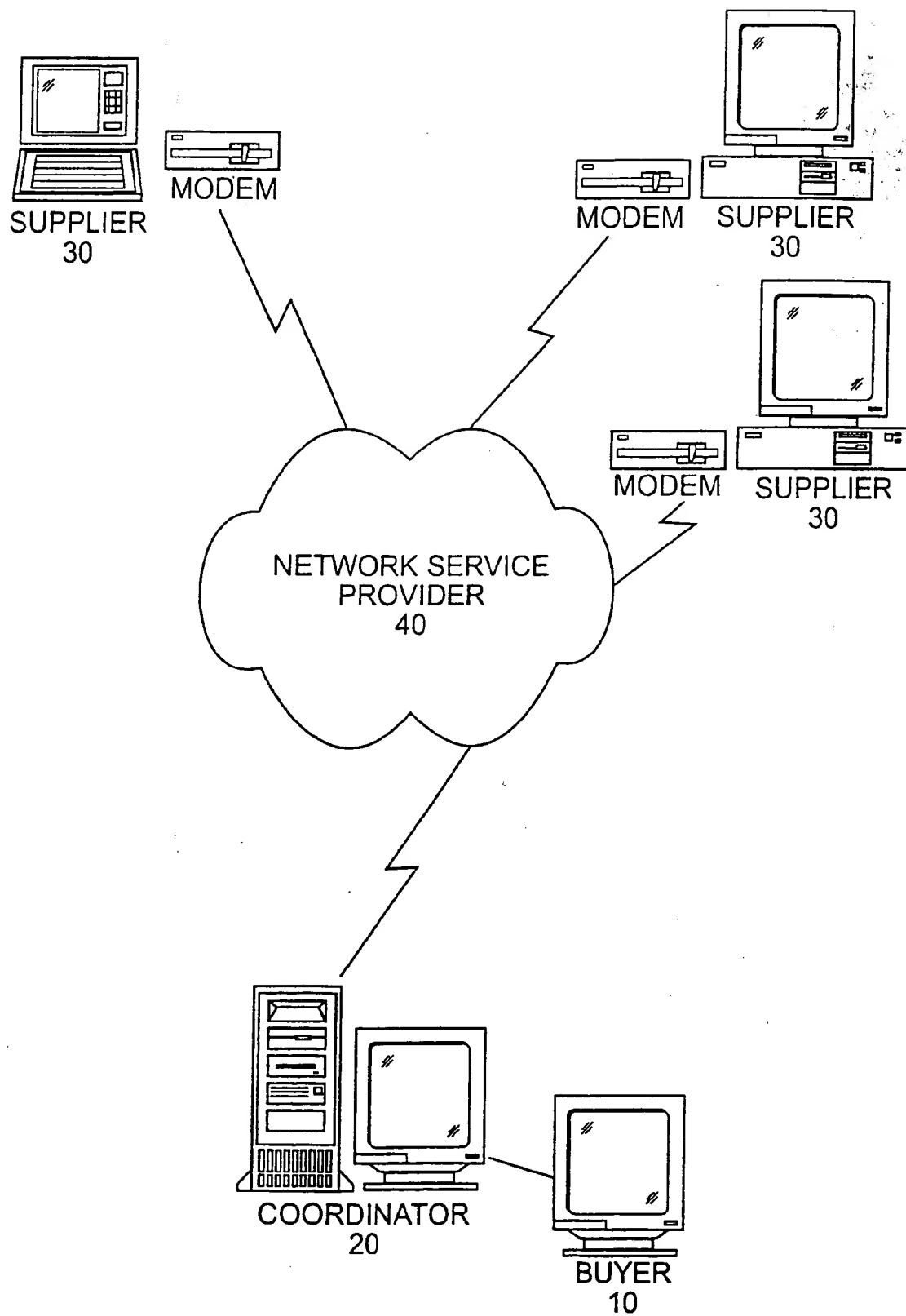
bidder.

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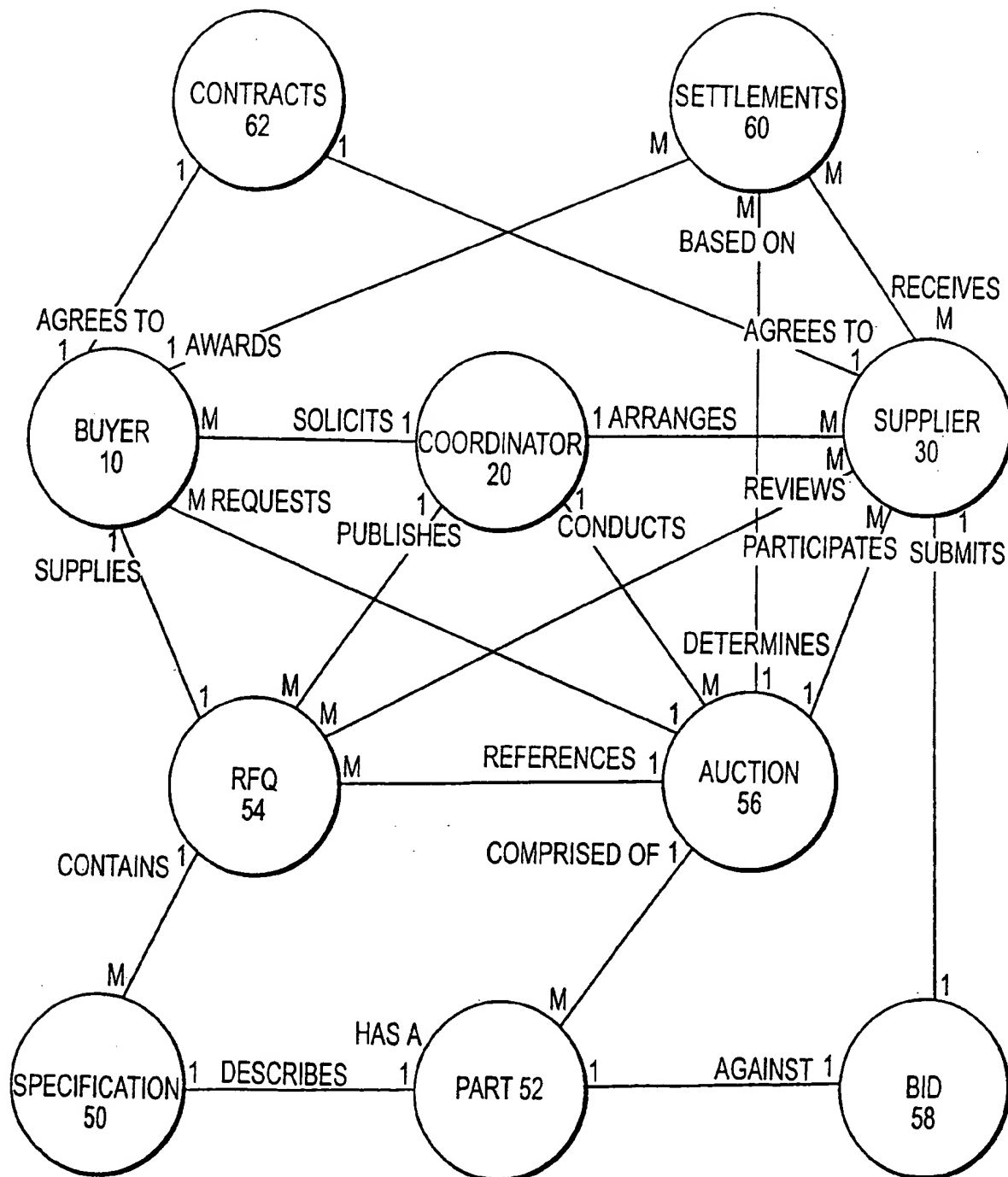
FIG. 1

	COORDINATOR	BUYER	SUPPLIER
INITIAL CONTACT 102	CONTACT BUYER	PROVIDE DATA	
RFQ 104	COLLECT & ADMINISTER RFQ DATA	PROVIDE RFQ DATA	
	PUBLISH & ADMINISTER RFQ		ACCESS RFQ
	MANAGE RFQ RESPONSE		RESPOND TO RFQ
AUCTION ADMINISTRATION 106		REQUEST AUCTION	
	COORDINATE & ADMINISTER AUCTION SETUP		
	ASSIST & ADMINISTER USER AUCTION PREP		PREPARE FOR AUCTION
CONDUCT AUCTION 108	ASSIST & ADMINISTER AUCTION	OBSERVE	BID
ADMINISTER AUCTION RESULTS 110	ANALYZE & ADMINISTER AUCTION RESULTS	VIEW AUCTION RESULTS	VIEW AUCTION RESULTS
CONTRACT ADMINISTRATION 112		SETTLEMENT	SETTLEMENT

FIG. 2

FIG. 3

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FIG. 4

BID
TRANSFORMATION

500

NON-COMPARATIVE
BID PARAMETERS

a_1

a_2

a_n

x

SUPPLIER COMPARATIVE
BID PARAMETER

$y = f(x, a_1, a_2, ..., a_n)$

BUYER COMPARATIVE
BID PARAMETER y
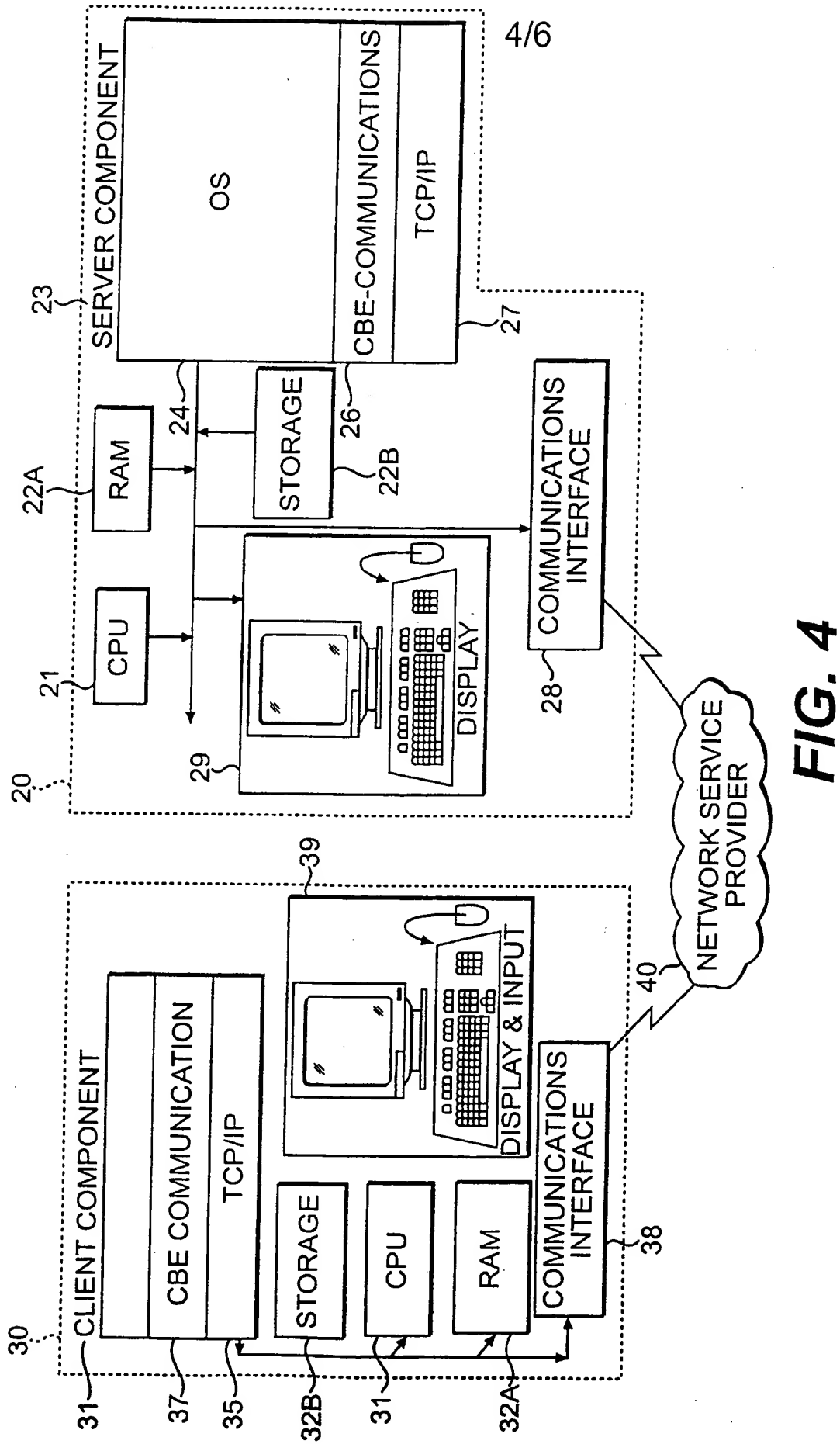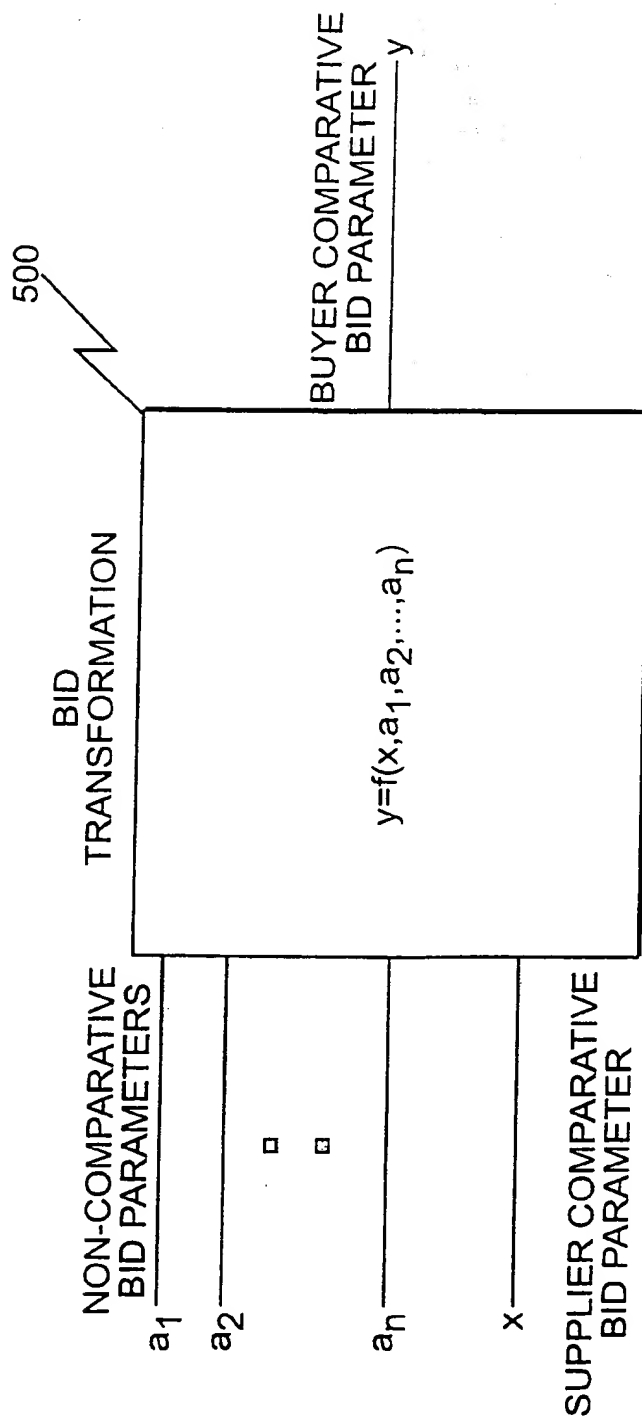
FIG. 5

BUYER VIEW

BIDDER	BID TIME	BID
SUP A	02:03:38	$1,674,479
SUP B	02:06:47	$1,608,031
SUP C	02:10:09	$1,604,368
SUP A	02:18:29	$1,593,606

FIG. 6A

SUPPLIER A VIEW (FRANCE)

BIDDER	BID TIME	BID
SUP A	02:03:38	FF 9,377,082
SUP B	02:06:47	FF 9,004,974
SUP C	02:10:09	FF 8,984,461
SUP A	02:18:29	FF 8,924,194

FIG. 6B

SUPPLIER B VIEW (GERMANY)

BIDDER	BID TIME	BID
SUP A	02:03:38	DM 2,846,614
SUP B	02:06:47	DM 2,733,653
SUP C	02:10:09	DM 2,727,426
SUP A	02:18:29	DM 2,709,130

FIG. 6C